

## CLIMATOLOGICAL DATA FOR SEPTEMBER, 1912.

## DISTRICT NO. 10, GREAT BASIN.

ALFRED H. THIESSEN, District Editor.

## GENERAL SUMMARY.

Like September of 1911 the weather during this month was very cool. The mean for the district as a whole was nearly  $6^{\circ}$  below the normal, and the month was one of the coldest on record. Killing frost occurred in practically every valley in Utah and in the northern half of Nevada. Some damage resulted from frost to alfalfa seed, tomatoes, and other crops.

The precipitation averaged about normal for the district. The first considerable snow fell this month. At Randolph, Utah, near the upper end of Bear Lake, the worst September storm ever known at that place was reported on September 13. Snow fell to a depth of 8 inches, lodging in the grain and making it difficult to harvest, and there was also considerable damage to lucerne.

The average number of rainy days was 3, clear days 18, partly cloudy days 7, and cloudy days 5.

## TEMPERATURE.

The mean temperature for the Great Basin was  $54.3^{\circ}$ , or  $5.7^{\circ}$  below normal. The coldest portion of the district was in the northeastern part, and the warmest in the southern half of Nevada and in the more level portions of the Utah area west of the Wasatch Mountains.

The local mean temperatures ranged from  $43^{\circ}$  at Woodruff, Utah, to  $65.4^{\circ}$  at Jean, Nev. The greatest departures from the normal occurred in the northern part of the Utah area, and the least in the Oregon and western portion of the Nevada areas. The station reporting the greatest departure was Corinne, Utah, whose mean,  $53.6^{\circ}$ , was  $11.6^{\circ}$  below normal.

The following were the highest temperatures that occurred in the various areas of the several States of this district:  $78^{\circ}$  at Border, Wyo., on the 2d;  $79^{\circ}$  at Weston, Idaho, on the 2d and 3d;  $94^{\circ}$  at Iosepa on the 1st and at Low on the 2d, both in Utah;  $82^{\circ}$  at Cliff, Oreg., on the 18th;  $79^{\circ}$  at Tahoe, Cal., on the 18th; and  $95^{\circ}$  at Carlin

on the 1st and at Gardnerville on the 16th, both in Nevada.

The lowest temperatures were:  $14^{\circ}$  at Cokeville, Wyo., on the 21st;  $23^{\circ}$  at Weston, Idaho, on the 21st and 25th;  $8^{\circ}$  at Woodruff, Utah, on the 25th;  $14^{\circ}$  at Cliff, Oreg., on the 24th;  $26^{\circ}$  at Tahoe, Cal., on the 4th and other dates; and  $8^{\circ}$  at Geyser, Nev., on the 20th, 23d, and 30th.

As a rule, the first and last few days of the month were somewhat warmer than the normal, but the temperatures for the greater portion of the month were much lower than the seasonal average. The warmest weather occurred usually on the 1st and 2d, except in the Oregon, California, and western portion of the Nevada areas, where it occurred on or about the 19th. The lowest temperatures were observed from the 20th to the 25th, as a rule, although at a few stations they were observed earlier in the month.

## PRECIPITATION.

The precipitation for the district averaged 0.62 inch, which is about normal. The largest amounts fell, as a rule, on the western slope of the Wasatch Mountains, and the least in the southern half of the Nevada area. As compared with the normal amounts, the precipitation was very irregular, but the greatest deficiencies occurred in the southern half of the district. The largest local monthly amount was 2.40 inches at Meadowville, Utah, while 15 stations reported no rain or only traces.

Most of the rain east of the western border of Utah fell previous to the 15th, but there were a few stations that reported light showers on the 20th, 23d, and 24th. Rain was especially heavy on the 8th, 9th, and 10th in the Utah area, when showers fell at practically every station. In the Oregon, California, and Nevada areas all the rain occurred previous to the 12th. The heaviest snow reported was 21.5 inches at Spooner's Ranch, in the Truckee Basin, at an elevation of 7,700 feet. Good rains and warmer weather, melting the greater portion of the snow, helped out the deficient water supply in that basin.

TABLE 1.—Climatological data for September, 1912. District No. 10, Great Basin.

TABLE 1.—Climatological data for September, 1912. District No. 10—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>Utah—Continued.</i>																				
Vernon.	Tooele.	5,500									0.73		0.45	0	3	16	5	9	nw.	Glynn Bennion.
Wendover.	do.	4,237	61.3		89	5	39	20	44	0.18	0.10	0.10	0	2	8	18	4	nw.	J. S. Cooper.	
Whisky Creek.	Millard.	4,850									0.90		0.90	0	1					George Stevens.
Winder.	Garfield.	7,000																		
Woodruff.	Rich.	6,500	10	43.0*		75	3	8	25	58	0.70	+ 0.42	0.30	2.0	5	19	6	5		A. L. Eastman.
<i>Oregon.</i>																				
Burns.	Harney.	4,157	21																J. C. Welcome, Jr.	
Cliff.	Lake.	4,300	5	48.0		82	18	14	24	59	0.58		0.24	0	5	16	10	4	nw.	John C. Green.
Paisley.	do.	4,500	9																E. C. Woodward.	
Silver Lake.	do.	4,700	15	53.2	- 0.4	82	26	23	14†	52	0.46	- 0.17	0.31	0	2	21	7	2	n.	G. W. Marvin
<i>California.</i>																				
Tahoe.	Placer.	6,240	2	49.3	- 5.3	79	18	26	4†	42	2.00		1.65	T.	0	3	24	1	w.	R. M. Watson.
Truckee.	Nevada.	5,819	41	50.6	- 5.3	79	20	27	4†	43	1.50	+ 1.20	1.50	T.	1	14	7	9	sw.	Southern Pacific Co.
<i>Nevada.</i>																				
Austin.	Lander.	6,594	23	55.4	- 3.6	85	17†	27	4	46	0.20	- 0.09	0.20	4.0		21	4	5	n.	F. O. Booe.
Battle Mountain.	do.	4,843	41	56.7	- 5.8	92	1	22	21	62	0.20	- 0.09	0.20	0	1	27	1	2	nw.	Southern Pacific Co.
Beowawe.	Eureka.	4,905	41	52.8	- 8.4	83	23†	21	17	57	0.41	+ 0.13	0.34	T.	3	18	8	4	w.	Do.
Carlin.	Elko.	5,232	41	53.8	- 4.3	95	1	14	24	70	0.28	+ 0.06	0.28	0	1	28	0	2	w.	Do.
Carson Dam.	Churchill.	4,032	5	58.2		86	19	31	25	43	0.30		0.26	0	2	21	3	6	w.	U. S. Reclamation Service.
Cherry Creek.	White Pine.	6,450	4	53.2		80	2	26	5	44	0.42		0.42	0	1	18	8	4	w.	J. H. Leishman.
Clover Valley.	Elko.	6,000	11	57.0	- 0.8	84	30	28	25	44	0.52	- 0.01	0.21	0	4	17	6	7	w.	I. F. Wiseman.
Columbia.	Esmeralda.	5,750	5	58.8		86	19	31	4	42	0.10		0.04	0	3	23	7	0	nw.	Walfrid Sohlman.
Dry Farm.	Elko.	5,600	0	54.8		79	29	27	21†	43	0.00		0.00	0	0				w.	A. Booth.
Elko.	do.	5,432	41	51.5	- 5.3	81	30	18	17†	58	0.40	+ 0.14	0.30	T.	4	17	5	8	w.	Clay Simms.
Eureka.	Eureka.	6,500	7	53.2		82	18	21	4	44	0.65		0.65	2.5	1	19	3	8	s.	U. S. Experiment Station.
Fallon.	Churchill.	3,965	7	58.2		90	19	29	25	49	0.43		0.43	0	1	22	3	1	s.	Mrs. G. A. Steele.
Fernley.	Lyon.	4,200	39	59.6	- 3.4	90	19	28	25	51	0.34	+ 0.16	0.26	0	3	17	6	7	w.	Forest Service.
Gardnerville.	Douglas.	4,830	12	54.8*	- 6.5	85	18	30	30†	51	0.61	+ 0.39	0.44	0	3	20	0	10	ne.	Western Pacific Co.
Gerlach.	Washeoe.	0	61.6			85	13	30	3	39				0		17	12	1	w.	Mrs. J. F. Wambolt.
Geyser.	Lincoln.	8	45.8			89	2	8	20†	73	T.		T.	0	0	17	12	1	s.	C. C. Henningson.
Glenbrook.	Douglas.	6,420	3	52.9		75	1†	31	9	37	1.43		0.60	6.8	5	8	13	9	w.	Southern Pacific Co.
Golcomita.	Humboldt.	4,697	33	55.2	- 6.4	88	12	26	25	50	0.07	- 0.24	0.07	0	1	12	11	7	w.	Do.
Halleck.	Elko.	5,631	19																	G. B. Stannard.
Hawthorne.	Mineral.	4,569	18	62.8*	- 1.9	89*	19	35†	4	41 <sup>m</sup>	0.00	- 0.22	0.00	0	0					Salt Lake Route.
Jean.	Clark.	2,074	4	65.4*		94 <sup>a</sup>	14	31 <sup>a</sup>	9	52 <sup>a</sup>	0.00		0.00	0	0					U. S. Reclamation Service.
Lahontan.	Churchill.	4,200	0	62.2		87	18	38	4†	41	0.17		0.14	0	3	24	3	3	w.	L. F. Detwiler.
Lida.	Esmeralda.	6,037	0	59.8		89	12	28	5	42	T.		T.	0	0	0	0	5	nw.	Ross Lewers.
Lewers Ranch.	Washeoe.	5,500	24	56.7	- 3.6	84	19	31	4	43	2.20	+ 1.54	1.80	0	2	17	8	5	s.	A. P. Tilford.
Lovelocks.	Humboldt.	3,977	18										0.98	+ 0.74	0.47	0	3			Scott Sterling.
McDermit.	do.	4,700	23	54.7	- 7.2	82	18	29	24	42	0.97	+ 0.67	0.38	0	4	18	7	5	n.	R. E. Middagh.
McGill.	White Pine.	6,338	21	51.8	- 3.4	81	19	21	15†	53	0.14	- 0.58	0.07	T.	4	22	3	5	s.	Fred J. Jones.
Millett.	do.	4	53.8			86	19	22	22	58	0.20		0.20	0	1	19	5	6	s.	Southern Pacific Co.
Mina.	Mineral.	4,600	5	65.2		91	1	40	6†	46	0.00		0.00	0	0	30	0	0	s.	A. S. Patterson.
Oasis Ranch.	Esmeralda.	5,106	0	57.4		84	1†	31	25	45	T.		T.	0	0	23	4	3	s.	Miss Mamie Potts.
Potts.	Nye.	6,990	19	48.4	- 7.3	83	1	17	25	53	T.	- 0.28	T.	0	0	12	11	7	n.	F. M. Payne.
Quinn River Ranch.	Humboldt.	4,850	10	53.5	- 3.3	90	21	19	16	70	0.29	- 0.10	0.14	0	3	19	1	10	w.	E. J. Hyatt.
Rebel Creek.	do.																			U. S. Weather Bureau.
Reno.	Washeoe.	4,532	41	53.4	- 1.3	89	19	35	25	43	0.39	+ 0.12	0.38	0	2	19	6	5	w.	U. S. Reclamation Service.
Soda Lake.	Churchill.	4,534	5																	Southern Pacific Co.
Tecoma.	Elko.	4,812	34	50.8	- 9.6	88	22	10	20	75	0.33	- 0.04	0.23	0	2	18	8	4	n.	U. S. Weather Bureau.
Tonopah.	Nye.	6,090	7	60.3		82	19	35	4	28	0.01		0.01	0	1	21	8	1	se.	U. S. Weather Bureau.
Wells.	Elko.	5,631	40	50.5	- 7.6	80	8†	20	25	58	0.00	- 0.12	0.00	0	0	22	0	8	sw.	Southern Pacific Co.
Winnemucca.	Humboldt.	4,432	33	55.0	- 5.5	85	18	28	25	54	0.34	± 0.00	0.22	0	4	18	5	7	ne.	U. S. Weather Bureau.

\* b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

\*\* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for September, 1912. District No. 10, Great Basin.*

Stations.	Watershed	Day of month.																													Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
<i>Wyoming.</i>																																		
Border.....	Bear.....			T.		T.		T.	.15	T.	.04		.05	.60							T.	.40										1.32		
Cokeville.....	do.....			14		T.		.24	.40	.03			.05	.60	T.																	0.96		
Ecanston.....	do.....																																1.16	
<i>Idaho.</i>																																		
Geneva.....	Bear.....																																	0.33
Grace.....	do.....																																	1.61
Paris.....	do.....																																	0.92
Weston.....	do.....	.02																																
<i>Utah.</i>																																		
Alpine.....	G. S. Lake.....																																	0.94
Beaver.....	Sevier Lake.....																																	0.75
Black Rock.....	do.....																																	0.70
Burrville.....	do.....																																	0.44
Castle Rock.....	G. S. Lake.....																																	1.20
Cedar City.....	Desert.....																																	0.93
Center.....	do.....																																	0.73
Clarkston.....	G. S. Lake.....																																	0.38
Corinne.....	do.....																																	T.
Deseret.....	Sevier Lake.....																																	1.00
Elberta.....																																		0.39
Erekson.....	Desert.....																																	0.66
Enterprise.....	G. S. Lake.....																																	0.00
Fairfield.....	do.....																																	0.41
Farmington.....																																		1.47
Fillmore.....	Sevier Lake.....																																	T.
Frisco.....	Desert.....																																	0.86
Garrison.....	do.....																																	0.85
Government Creek.....	do.....																																	0.61
Granger.....	do.....																																	0.58
Grantsville.....	G. S. Lake.....																																	1.57
Grouse Creek.....	Desert.....																																	1.15
Heber.....	G. S. Lake.....																																	0.56
Henefer.....	do.....																																	
Hooper.....	do.....																																	
Ibapah (near).....	Desert.....																																	
Ibex.....	do.....																																	
International.....	G. S. Lake.....																																	T.
Iosepa.....	Desert.....																																	
Joy.....	do.....																																	
Junction.....	Sevier Lake.....																																	
Kanosh.....	do.....																																	1.81
Kelton.....	G. S. Lake.....																																	0.46
Lemay.....	Desert.....																																	0.00
Levan.....	Sevier Lake.....																																	0.94
Logan.....	G. S. Lake.....																																	0.54
Low.....	do.....																																	0.07
Lucin.....	Desert.....																																	
Lund.....	do.....																																	
Manti.....	Sevier Lake.....																																	1.24
Maple Creek.....	G. S. Lake.....																																	0.96
Marion.....	do.....																																	1.66
Marysvale.....	Sevier Lake.....																																	2.40
Meadowville.....	G. S. Lake.....																																	T.
Midlake.....	do.....																																	.01
Midvale.....	do.....																																	1.07
Milford.....	Sevier Lake.....																																	0.50
Millville.....	G. S. Lake.....																																	0.55
Mills.....	Sevier Lake.....																																	1.11
Minersville.....	do.....																																	0.06
Modena.....	Desert.....																																	1.24
Morgan.....	G. S. Lake.....																																	0.87
Mosida.....	G. S. Lake.....		</td																															

TABLE 2.—*Daily precipitation for September, 1912. District No. 10—Continued.*

\* Precipitation included in that of the next measurement.

\* Precipitation included in that of the  
† Separate dates of falls not recorded.

Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

## MONTHLY WEATHER REVIEW.

SEPTEMBER, 1912

TABLE 3.—Maximum and minimum temperatures for September, 1912. District No. 10, Great Basin.

Date.	Wyoming.				Weston, Idaho.		Utah.																			
	Border.		Evanston.				Corinne.		Deseret.		Government Creek.		Meadow-ville.		Modena.		Ogden.		Parowan.		Provo.		Richfield.		Salt Lake City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.	65	38	68	42	70	44	86	40	85	57	76	56	69	39	76	45	75	45	74	47	85	50	82	47	72	55
2.	73	40	73	36	79	48	82	50	81	53	80	53	77	44	76	50	82	45	78	—	87	43	82	48	83	62
3.	76	35	72	40	79	59	82	64	78	57	77	53	76	45	73	60	78	59	74	49	86	46	78	54	79	67
4.	64	35	66	42	73	42	72	45	71	44	81	39	67	43	63	42	62	50	67	48	68	41	71	51	67	48
5.	62	31	68	30	69	31	65	36	72	34	69	33	61	30	68	30	64	42	72	32	70	33	72	33	69	44
6.	66	25	73	30	77	33	77	41	80	33	82	41	75	31	73	31	76	46	78	38	82	33	79	32	82	48
7.	76	36	68	42	74	44	75	52	80	54	81	43	69	41	73	45	75	50	76	46	82	33	81	33	70	55
8.	68	40	60	40	61	43	68	45	64	46	55	42	66	42	60	44	67	47	68	44	68	45	58	50	58	50
9.	60	46	58	39	56	43	65	44	49	44	60	43	60	42	60	45	53	40	64	43	49	41	58	48	48	49
10.	62	38	51	37	65	46	65	45	64	44	61	35	56	39	64	33	60	46	64	40	67	43	62	42	62	49
11.	62	35	61	37	67	38	68	45	70	39	63	37	63	38	73	36	63	48	70	37	70	38	68	38	64	49
12.	62	31	60	31	70	37	69	39	73	40	66	39	64	37	73	39	65	44	71	41	71	38	67	39	67	49
13.	66	32	61	33	71	39	72	42	72	44	69	40	67	37	76	44	63	44	71	43	73	35	69	37	71	48
14.	56	31	52	28	55	27	66	42	59	42	67	39	55	32	60	44	59	43	62	41	60	41	57	37	57	45
15.	52	25	51	23	60	27	65	36	62	30	53	30	45	25	55	42	59	40	50	38	63	28	65	36	62	44
16.	65	23	58	22	67	27	65	29	68	33	65	32	61	30	69	37	63	32	65	35	69	26	64	29	66	40
17.	68	24	65	27	74	30	69	32	75	30	70	34	64	33	78	32	66	33	73	35	74	27	69	29	72	43
18.	70	25	65	25	74	30	72	33	77	31	72	39	67	32	78	36	70	37	76	36	78	29	72	29	74	45
19.	65	26	67	35	74	43	75	30	84	35	77	45	62	40	84	37	72	34	81	33	82	32	80	32	74	54
20.	64	19	53	20	62	31	60	34	65	27	65	26	54	26	66	38	69	33	72	33	64	30	62	35	59	41
21.	55	15	54	16	62	23	62	28	70	27	76	32	55	24	63	27	66	30	68	28	64	24	60	26	57	36
22.	66	15	63	21	68	25	60	28	77	44	69	44	65	30	75	24	66	29	72	34	73	23	71	27	72	38
23.	57	28	55	35	66	42	63	30	61	39	69	43	57	40	77	40	64	38	75	35	74	35	74	36	68	52
24.	48	22	50	34	60	33	68	27	65	35	66	35	52	35	64	37	60	39	68	39	59	37	72	36	65	43
25.	55	25	55	18	63	23	70	27	65	35	60	27	57	25	67	30	61	32	67	32	66	24	63	27	63	38
26.	61	20	67	28	70	29	75	30	73	27	61	28	63	36	75	28	66	33	73	33	75	25	70	28	69	42
27.	65	20	67	29	76	30	72	26	79	31	74	35	67	36	80	32	70	33	77	37	81	28	74	30	74	47
28.	65	23	64	31	75	30	75	28	80	30	77	40	64	33	76	35	75	37	81	41	83	39	80	31	76	49
29.	69	24	60	30	74	35	73	28	80	35	73	40	64	34	75	37	72	40	75	40	83	31	71	54	71	54
30.	72	23	71	24	78	32	74	34	81	33	77	40	65	30	78	37	75	42	77	41	83	33	77	33	78	49
Mns.	64.0	28.3	61.9	30.9	69.0	35.5	70.3	37.0	72.0	38.1	69.9	38.5	62.9	35.0	70.9	37.9	67.4	40.7	70.5	38.5 <sup>b</sup>	73.5	34.4	70.3 <sup>a</sup>	36.6 <sup>a</sup>	68.3	47.7

Date.	Nevada.																									
	Cherry Creek.		Elko.		Eureka.		Fallon.		Fernley.		Hawthorne.		Jean.		Millett.		Quinn River Ranch.		Reno.		Tacoma.		Tonopah.		Winne-mueca.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.	76	46	75	49	78	40	83	46	83	53	—	51	92	53	80	43	77	42	78	50	73	30	74	52	79	52
2.	80	55	80	41	80	53	80	47	75	52	—	55	90	52	80	50	74	44	64	52	77	35	72	49	75	46
3.	75	44	75	40	74	49	52	42	61	41	—	48	87	46	74	35	66	38	55	41	80	41	65	37	55	36
4.	55	35	49	35	49	21	62	36	60	39	—	35	83	39	56	30	64	30	59	39	75	33	53	35	58	34
5.	65	26	67	25	60	30	74	34	65	33	—	37	85	40	70	24	66	28	64	35	70	28	65	44	68	32
6.	75	42	76	33	70	40	79	44	74	48	—	—	88	42	75	45	69	39	64	39	80	20	71	50	77	41
7.	71	46	72	43	65	35	68	45	67	37	—	—	84	33	67	42	62	39	61	38	73	30	64	50	63	40
8.	56	40	68	35	60	30	67	43	67	42	—	—	83	34	64	36	59	32	64	40	76	32	59	43	63	35
9.	55	36	66	28	59	28	69	35	71	34	—	—	81	31	64	32	72	30	70	36	71	36	61	38	69	32
10.	59	44	68	41	65	36	75	35	76	34	—	—	82	36	69	31	75	27	73	36	68	35	65	46	72	34
11.	61	43	69	44	73	37	78	38	80	39	39	—	92	40	71	35	80	32	77	40	69	30	70	49	75	46
12.	71	36	75	35	67	39	83	42	85	42	42	—	93	42	75	35	85	31	82	44	70	21	75	54	81	40
13.	73	39	77	32	65	35	84	40	86	36	42	—	92	55	81	34	83	31	84	45	85	29	76	57	82	38
14.	64	39	74	39	62	32	74	51	80	52	73	—														